

P:\PROJECTS\Sandy Hook\11001\_Sandy Hook - Contract 10\Drawings\Contract 10\Record Drawings\RD 11001-10-10.dwg REC 9/04/14



**NOTES:**  
 1. INSTALL WATER MAIN ON COUNTY RIGHT-OF-WAY  
 2. DIRECTIONAL DRILL SHALL INCLUDE STATE HIGHWAY

STA. 10+00  
 CONNECT TO EX. 3" W.M.  
 1-2"x3"x3" TEE W/SLEEVE  
 1-2" G.V. & BOX

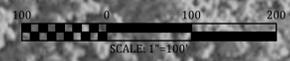
MAUDE ADKINS  
 160 L.F. DIRECTIONAL  
 DRILL CREEK CROSSING

STA. 24+00  
 END OF LINE  
 1-BLOWOFF ASSEMBLY

20 L.F. OF 2" PVC CASING  
 OVER EXIST. CULVERT  
 SERVICE LINE

**RECORD DRAWINGS**  
 TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF  
 THIS SET OF RECORD DRAWING SHOWS THE REPORTED  
 LOCATION OF THE WORK AND SIGNIFICANT CHANGES MADE  
 DURING THE CONSTRUCTION PROCESS. THESE RECORD  
 DOCUMENTS ARE BASED ON UNVERIFIED INFORMATION  
 PROVIDED BY OTHER PARTIES WHICH WILL BE ASSUMED  
 RELIABLE. THE DESIGN PROFESSIONAL CANNOT AND DOES  
 NOT WARRANT THEIR ACCURACY.  
 BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14

**ALL PIPE THIS SHEET  
 SHALL BE PVC, CLASS 200**



IT IS A VIOLATION OF LAW FOR ANY PERSON TO ALTER THIS DRAWING WITHOUT WRITTEN PERMISSION FROM KENTUCKY ENGINEERING GROUP, PLLC AND ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER.  
 THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE DRAWING OR TITLE BLOCK TO DETERMINE THE ACTUAL SCALE.

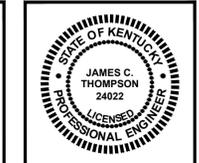
NO.	DATE	REVISIONS	BY
	SEPT. 5, 2014	RECORD DRAWINGS	CDS

DATE:	JANUARY 2013
PROJECT MGR:	LRS
DRAWN BY:	CDS
CHECKED BY:	LRS
SCALE:	AS NOTED
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Contract No. 10  
**SANDY HOOK WATER DISTRICT  
 WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
 E.J. ADKINS ROAD**



PROJECT NO.	11001
SHEET NO.	10
OF 17	

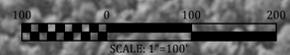
P:\PROJECTS\Sandy Hook\11001-10\Drawings\Contract 10\Record Drawings\RD 11001-10-1.dwg REC 9/04/14



**NOTE:**  
WATER MAIN MAY ONLY BE INSTALLED AFTER PROPOSED WELL IS OPERABLE OR AT A TIME DIRECTED BY ENGINEER.

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14

**ALL PIPE THIS SHEET SHALL BE PVC, CLASS 200**



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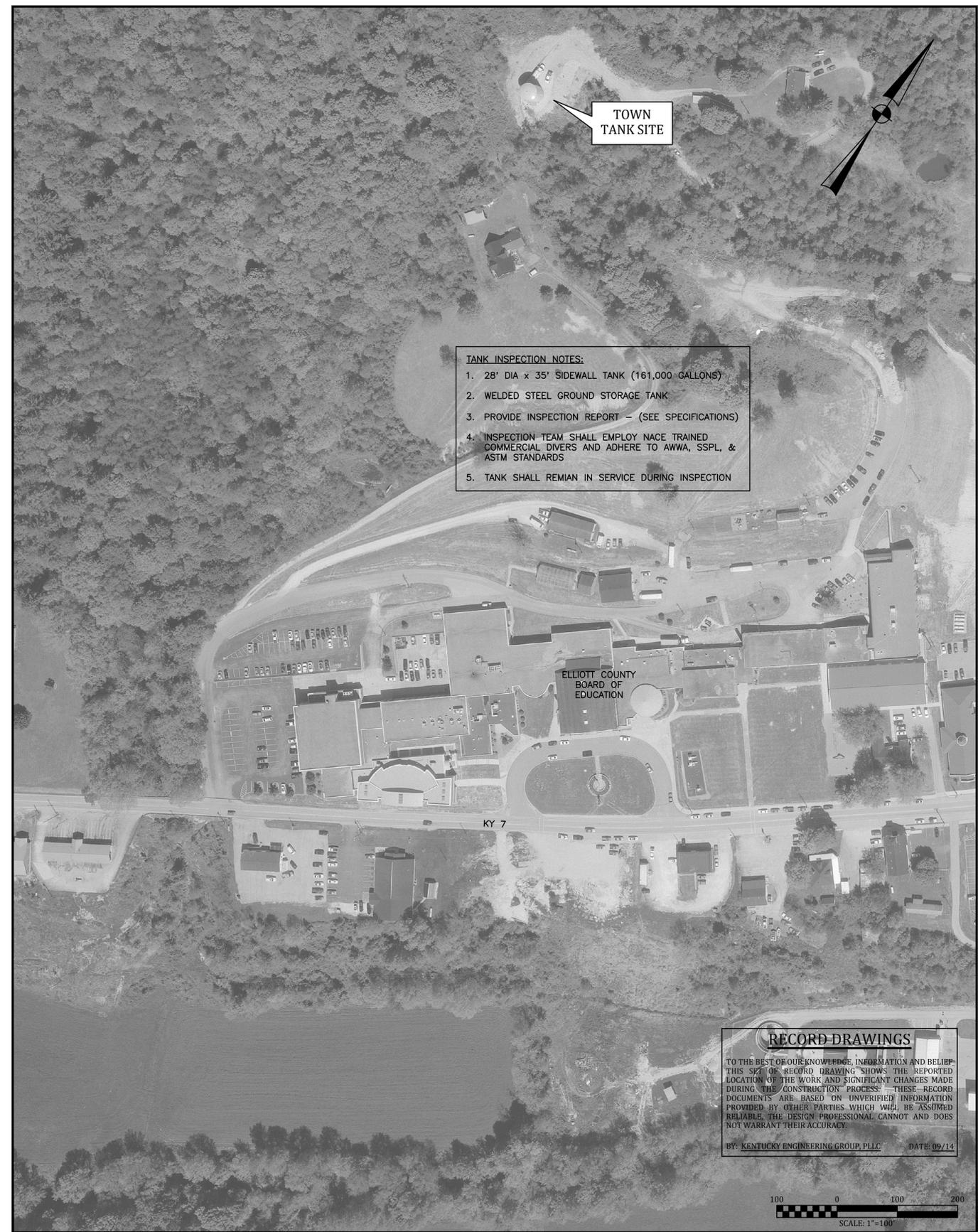
Contract No. 10  
**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**  
ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
HOWARDS CREEK ROAD**



PROJECT NO.	11001
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BY: KENTUCKY ENGINEERING GROUP, PLLC      DATE: 09/14

SCALE: 1"=100'

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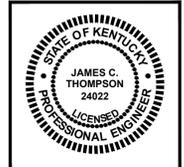
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Contract No. 10  
**SANDY HOOK WATER DISTRICT  
 WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
 CEMETERY and TOWN  
 TANK SITES**

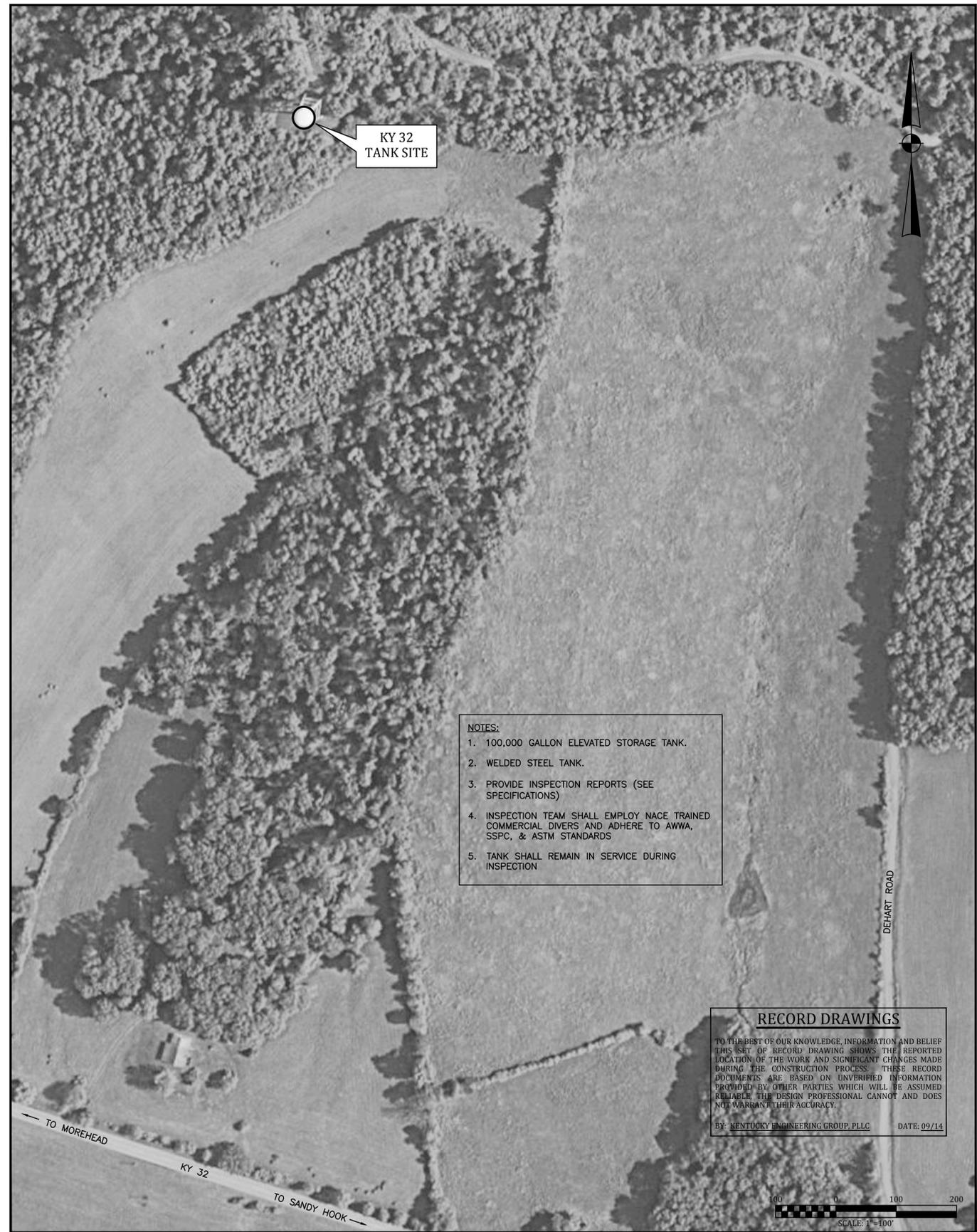


PROJECT NO. 11001	SHEET NO. 12
OF 17	

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- NOTES:**
1. 20' DIA x 47' SIDEWALL (100,000 GALLONS)
  2. GLASS LINED BOLTED STEEL TANK
  3. PROVIDE INSPECTION REPORTS (SEE SPECIFICATIONS)
  4. INSPECTION TEAM SHALL EMPLOY NACE TRAINED COMMERCIAL DIVERS AND ADHERE TO AWWA, SSPC, & ASTM STANDARDS
  5. TANK SHALL REMAIN IN SERVICE DURING INSPECTION

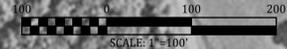


- NOTES:**
1. 100,000 GALLON ELEVATED STORAGE TANK.
  2. WELDED STEEL TANK.
  3. PROVIDE INSPECTION REPORTS (SEE SPECIFICATIONS)
  4. INSPECTION TEAM SHALL EMPLOY NACE TRAINED COMMERCIAL DIVERS AND ADHERE TO AWWA, SSPC, & ASTM STANDARDS
  5. TANK SHALL REMAIN IN SERVICE DURING INSPECTION

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14



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SCALE:	AS NOTED
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Contract No. 10

**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**

ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
WRIGLEY TANK SITE**



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**SANDY HOOK WATER PLANT**

**NOTE 1:**

- a. INSTALL (1) 2" RELIEF VALVE W/6"x2" SADDLE & BALL VALVE.
- b. INSTALL 2" PVC, CLASS 200 PIPE FROM VALVE THRU WALL W/TIDFLEX RED VALVE.
- c. INSTALL FOAM INSULATION BETWEEN WALL & PIPE.



**KY 7 PUMP STATION**

**NOTES:**

- 1. PROVIDE AND INSTALL A QUICK CONNECT PROVISION FOR A PORTABLE GENERATOR.
- 2. HOOK-UP SHALL CONSIST OF A MANUAL OR AUTOMATED SWITCH.
- 3. EXISTING PUMP STATION:  
3 PHASE, 208-230/480 VOLTS, 10 hp, 3450 RPM, 27-25/12.5 AMPS
- 4. CONTRACTOR SHALL TEST NEW 35KW GENERATOR AFTER QUICK CONNECT HAS BEEN COMPLETED.

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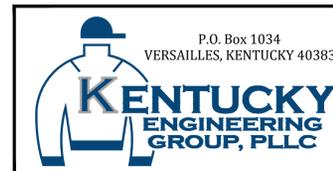
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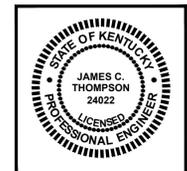
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Contract No. 10  
**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**  
ELLIOTT COUNTY, KENTUCKY

**SANDY HOOK WATER  
TREATMENT PLANT  
and KY 7 PUMP STATION  
MODIFICATIONS**



PROJECT NO.	11001
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OF 17	

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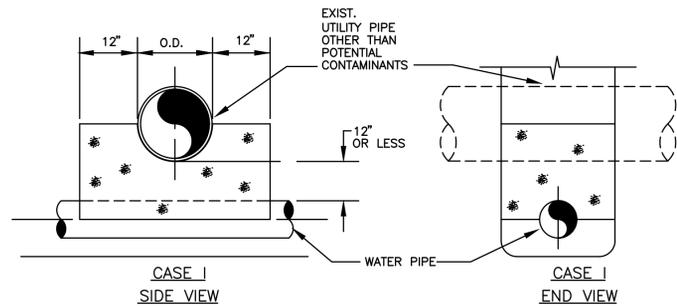
THRUST BLOCK SCHEDULE - CLASS 200 PVC														SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF													
PIPE SIZE	90° BEND				45° BEND				22 1/2° BEND				11 1/2° BEND				TEE & DEAD ENDS										
	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W							
4"	1.78	0.07	12"	16"	1.00	0.04	12"	12"	0.50	0.02	12"	6"	0.25	0.01	6"	6"	1.50	0.06	12"	18"	12"						
6"	4.00	0.15	12"	24"	2.25	0.08	12"	18"	1.33	0.05	12"	12"	0.56	0.01	6"	8"	3.00	0.11	12"	24"	18"						
8"	7.50	0.42	18"	36"	4.00	0.22	18"	24"	2.00	0.11	18"	16"	1.00	0.04	12"	12"	5.00	0.28	18"	30"	24"						
10"	11.67	0.65	18"	42"	6.25	0.35	18"	30"	3.33	0.19	18"	24"	2.00	0.07	12"	18"	8.75	0.49	18"	42"	30"						
12"	16.00	0.89	18"	48"	9.00	0.50	18"	36"	5.00	0.28	18"	30"	2.22	0.08	12"	20"	14.00	0.78	18"	48"	42"						
14"	22.50	1.67	24"	60"	12.25	0.91	24"	42"	6.25	0.46	24"	30"	3.33	0.19	18"	24"	17.50	1.30	24"	60"	42"						
16"	30.00	2.22	24"	72"	16.00	1.19	24"	48"	9.00	0.67	24"	36"	4.00	0.22	18"	24"	20.00	1.48	24"	60"	48"						

THRUST BLOCK SCHEDULE - CLASS 250 PVC														SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF													
PIPE SIZE	90° BEND				45° BEND				22 1/2° BEND				11 1/2° BEND				TEE & DEAD ENDS										
	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W							
4"	2.667	.10	12	24	1.500	.06	12	18	1.250	.03	12	12	0.500	.01	6	12	6	1.667	.06	12	24	10					
6"	5.000	.19	12	36	2.000	.11	12	24	1.500	.06	12	18	0.750	.01	6	12	9	4.000	.15	12	24	24					
8"	9.000	.50	18	36	3.000	.28	18	36	2.000	.17	18	24	1.500	.06	12	18	12	7.000	.39	18	42	24					
10"	9.255	.78	18	48	4.750	.42	18	36	3.000	.23	18	30	2.250	.08	12	18	18	10.500	.58	18	42	36					
12"	13.327	1.11	18	60	12.000	.67	18	48	3.600	.33	18	36	3.000	.11	12	24	14.000	.78	18	48	42						
14"	18.139	2.00	24	72	15.750	1.17	24	54	4.250	.56	24	36	4.000	.22	18	24	20.000	1.48	24	60	48						
16"	23.692	2.65	24	78	20.000	1.48	24	60	4.500	.78	24	42	4.000	.28	18	30	27.000	2.00	24	72	54						

THRUST BLOCK SCHEDULE - CLASS 350 D.I.P.														SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF													
PIPE SIZE	90° BEND				45° BEND				22 1/2° BEND				11 1/2° BEND				TEE & DEAD ENDS										
	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W	BEARING AREA	YTS OF CONCRETE	D	W							
4"	3.750	.21	18	30	1.8	.10	18	14	1.000	.06	18	12	1.2	.02	12	6	2.250	.13	18	18	18						
6"	7.000	.39	18	42	2.4	.18	30	18	2.000	.11	18	24	1.000	.04	12	12	5.000	.28	18	30	24						
8"	12.250	.91	24	42	4.2	.56	24	36	4.000	.30	24	24	2.000	.11	18	24	12	9.000	.67	24	36	36					
10"	20.000	1.48	24	60	10.500	.78	24	42	6.000	.44	24	36	3.000	.17	18	24	18	14.000	1.04	24	48	42					
12"	30.000	2.78	30	72	15.750	1.46	30	54	7.500	.69	30	36	4.000	.30	24	24	20.000	1.85	30	60	48						
14"	39.000	4.33	36	78	20.000	2.22	36	60	10.500	1.17	36	42	6.000	.56	30	36	24	27.500	3.06	36	66	60					
16"	49.000	6.35	42	84	27.500	3.56	42	66	14.000	1.81	42	48	7.500	.83	36	36	30	37.500	4.63	42	78	66					

### THRUST-BLOCKING SCHEDULE

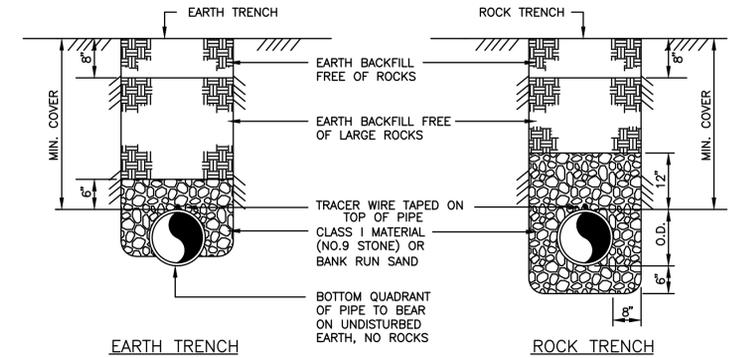
NOT TO SCALE



- NOTES:
- CONCRETE SEPARATOR SHALL BE USED WHEN CLEARANCE BETWEEN WATER LINE AND UTILITY PIPE IS 12" OR LESS.
  - "UTILITY PIPE" INCLUDES UNDERGROUND WATER, NATURAL GAS, TELEPHONE, ELECTRICAL CONDUITS, STORM SEWER OR TYPICALLY NON-CONTAMINATING FACILITIES, WHEN CROSSING SANITARY SEWER OR POTENTIAL CONTAMINANTS SEE DETAIL "WATER/SANITARY SEWER CROSSING".

### UTILITY CROSSING CONCRETE SEPARATOR

NOT TO SCALE

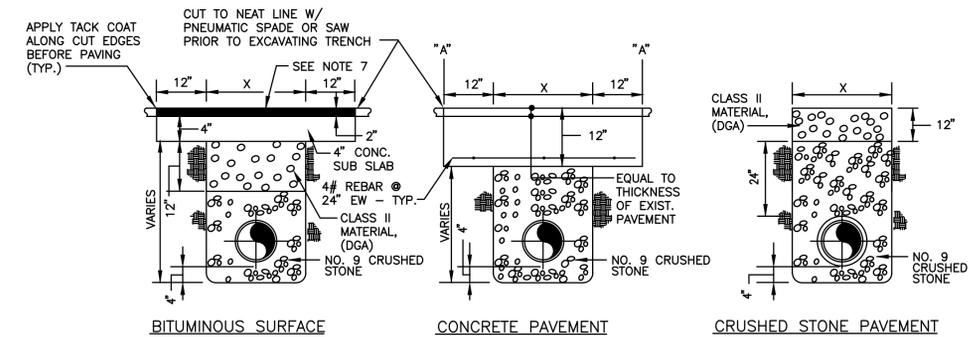


### TYPICAL BEDDING and BACKFILL

NOT TO SCALE

NOTES:

- REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND THICKNESS (2" MIN.) AS EXISTING PAVEMENT.
- IF ROCK IS ENCOUNTERED, A MINIMUM OF 6" NO. 9 CRUSHED STONE MUST BE PLACED UNDER THE ENCASEMENT PIPE.
- X = MAX. WIDTH OF TRENCH AT SURFACE UNDER NORMAL CONDITIONS (36" + PIPE O.D.).
- FROM POINTS "A" TO NEAREST JOINT OR BREAK IN PAVEMENT MUST BE AT LEAST 6' OR MORE. IF LESS THAN 6' REMOVE PAVEMENT TO JOINT OR BREAK AND REPLACE ENTIRE SLAB.
- NO. 610 CRUSHED STONE MAY BE SUBSTITUTED FOR MECHANICALLY TAMPED EARTH BACKFILL WITH PRIOR APPROVAL OF THE ENGINEER.
- 1" SAW CUT OUTSIDE OF TRENCH LINES, BITUMINOUS PATCH PLACED IN 2" LIFTS WITH TACK COAT ON EACH SIDE, EACH LIFT COMPACTED WITH SMALL ROLLER.

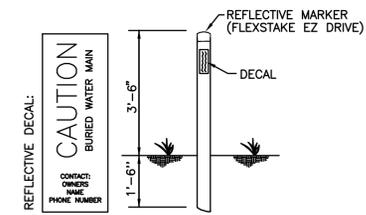


### PAVEMENT REPLACEMENT

NOT TO SCALE

NOTE:

WATER MARKERS SHALL BE PLACED WHENEVER A ROAD CROSSING IS MADE AT EACH SIDE OF THE ROAD AND AT EACH VALVE OR SET OF VALVES.



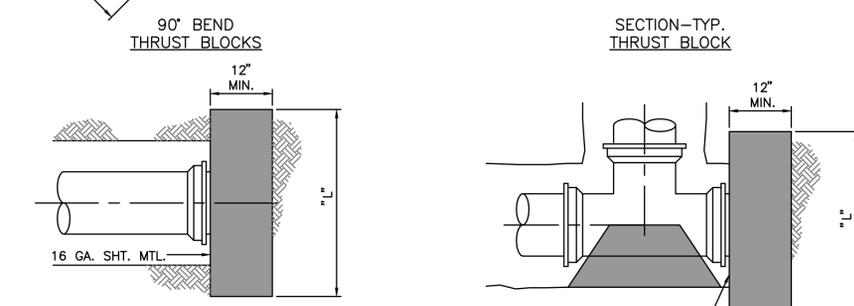
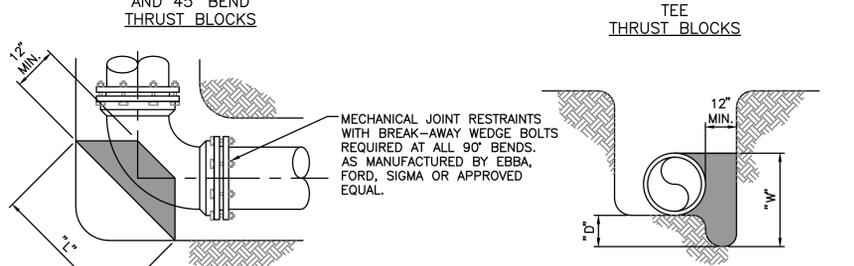
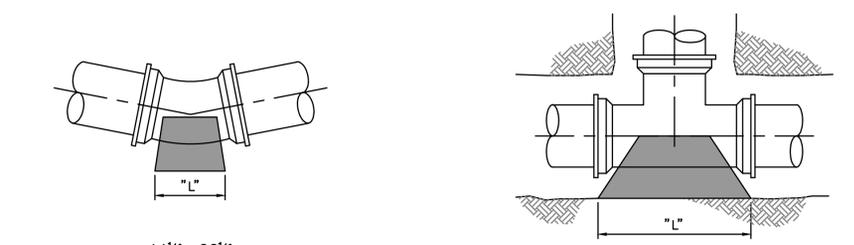
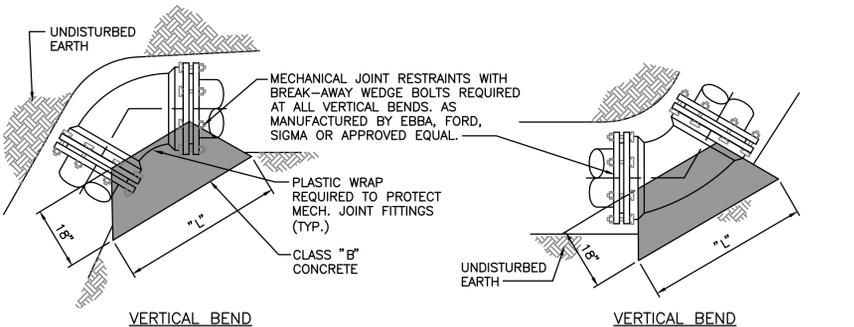
### WATER MARKER DETAIL

NOT TO SCALE

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14



### THRUST-BLOCKING DETAIL

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SCALE:	AS NOTED
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P.O. Box 1034  
VERSAILLES, KENTUCKY 40383

**KENTUCKY ENGINEERING GROUP, PLLC**

Contract No. 10

**SANDY HOOK WATER DISTRICT**  
WATER SYSTEM IMPROVEMENTS  
ELLIOTT COUNTY, KENTUCKY

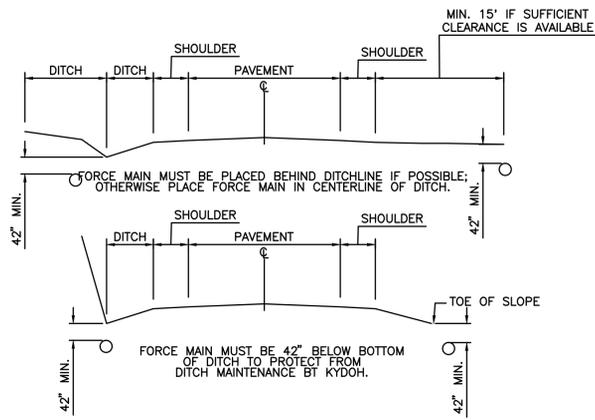
STANDARD DETAILS

STATE OF KENTUCKY  
JAMES C. THOMPSON  
24022  
LICENSED PROFESSIONAL ENGINEER

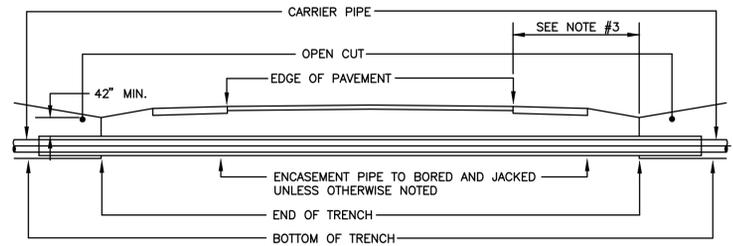
PROJECT NO.  
11001

SHEET NO.  
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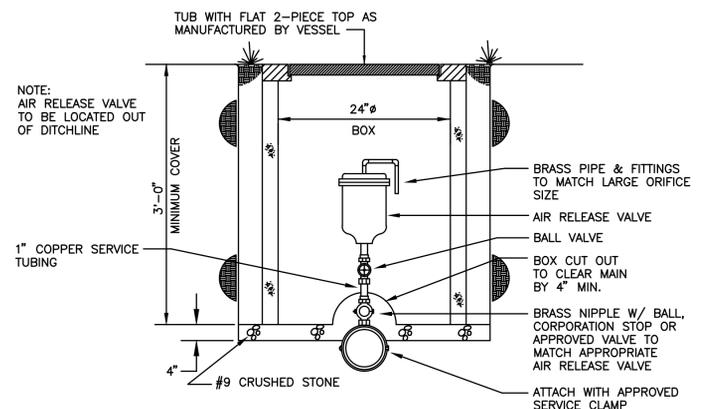
**TYPICAL CONSTRUCTION ON KYDOH RIGHT-OF-WAY**  
NOT TO SCALE



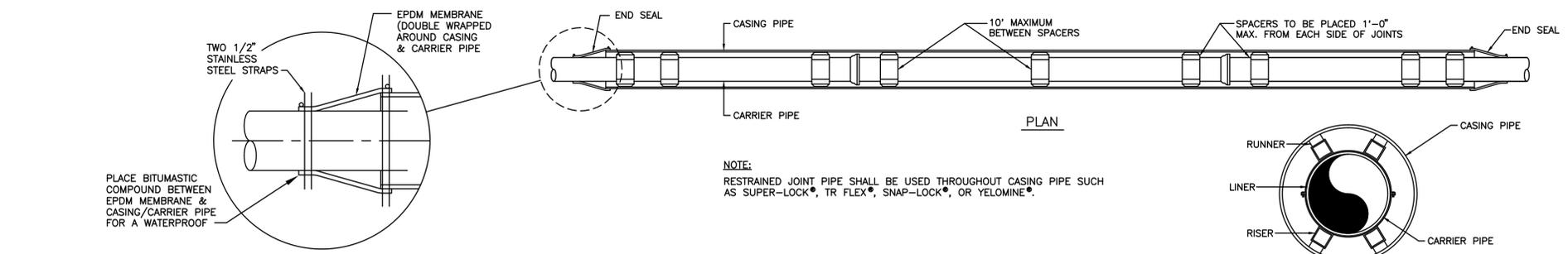
NOTE: SEE DETAIL A FOR PLACEMENT OF CARRIER PIPE IN CASING PIPE.

- NOTES:
1. ALL JOINTS SHALL BE SOLIDLY WELDED. END OF CASING SHALL BE SEALED AFTER LINE HAS BEEN INSTALLED AND TESTED.
  2. MINIMUM DEPTHS MAY INCREASE IN AREAS WHICH REQUIRE MINIMUM SEPARATION WITH OTHER FACILITIES.
  3. OPEN TRENCH NO CLOSER THAN THE DITCHLINE OR TOE OF FILL FROM THE EDGE OF THE PAVEMENT OR AS DIRECTED BY THE SPECIFICATIONS.
  4. HIGHWAY CROSSINGS SHALL UTILIZE STEEL CASING PIPE. STEEL CASING PIPES 4" AND LESS SHALL BE NEW SCHEDULE 40. STEEL CASING PIPES LARGER THAN 4" SHALL HAVE MINIMUM WALL THICKNESS OF 0.25". ALL BORED AND JACKED ENCASEMENT PIPE SHALL BE INSTALLED IN BORE HOLES NO LARGER THEN THE OUTSIDE DIAMETER OF THE ENCASEMENT PIPE.

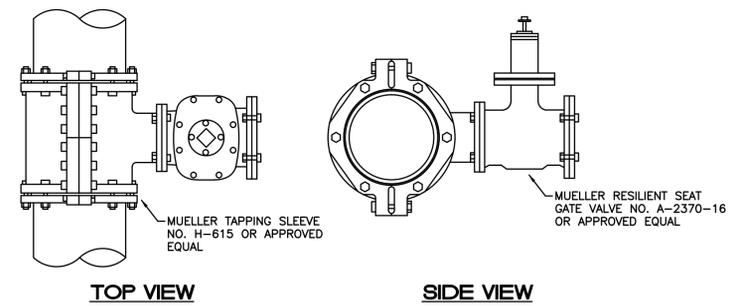
**CROSS SECTION OF ENCASED ROAD CROSSING - TYPICAL**  
NOT TO SCALE



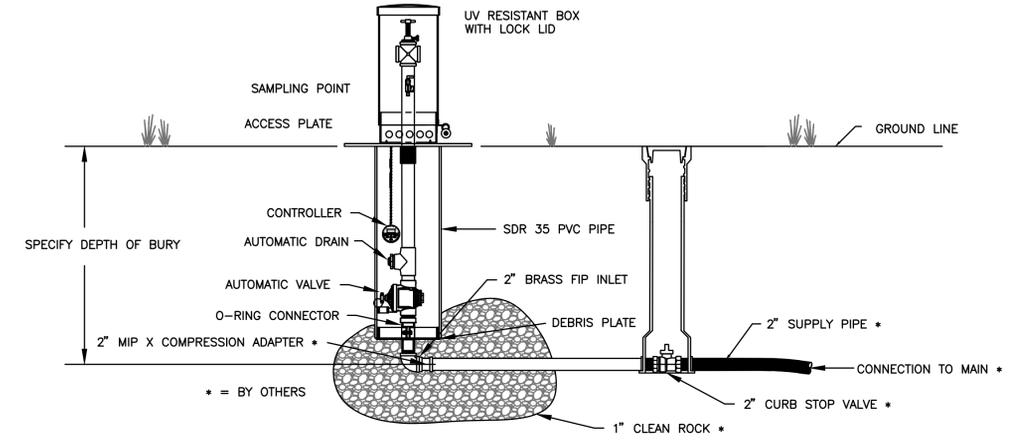
**AIR RELEASE VALVE**  
NOT TO SCALE



**DETAIL "A" - ENCASEMENT PIPE SPACER**  
NOT TO SCALE

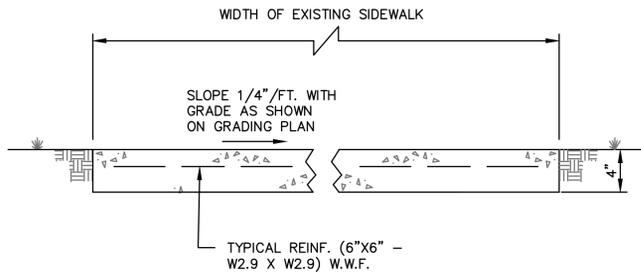


**TYPICAL - WET TAP**  
NOT TO SCALE

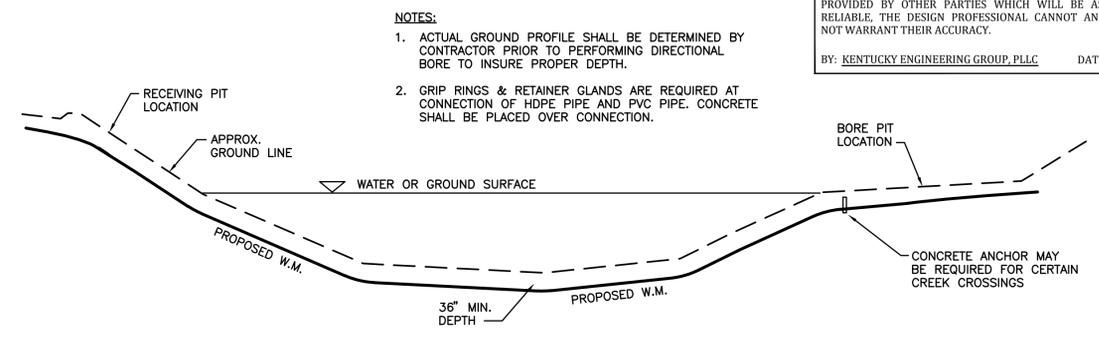


NOTE: FLUSH WATERLINES FREE OF DEBRIS BEFORE INSTALLATION

**AUTOMATIC FLUSHING DEVICE**  
NOT TO SCALE



**CONCRETE SIDEWALK**  
NOT TO SCALE



**TYPICAL CREEK/SURFACE DIRECTIONAL BORE DETAIL**  
NOT TO SCALE

**RECORD DRAWINGS**

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14

- NOTES:
1. ACTUAL GROUND PROFILE SHALL BE DETERMINED BY CONTRACTOR PRIOR TO PERFORMING DIRECTIONAL BORE TO INSURE PROPER DEPTH.
  2. GRIP RINGS & RETAINER GLANDS ARE REQUIRED AT CONNECTION OF HDPE PIPE AND PVC PIPE. CONCRETE SHALL BE PLACED OVER CONNECTION.

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PROJECT MGR:	LRS
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CHECKED BY:	LRS
SCALE:	AS NOTED
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Contract No. 10

**SANDY HOOK WATER DISTRICT**  
WATER SYSTEM IMPROVEMENTS  
ELLIOTT COUNTY, KENTUCKY

**STANDARD DETAILS**



PROJECT NO.  
11001

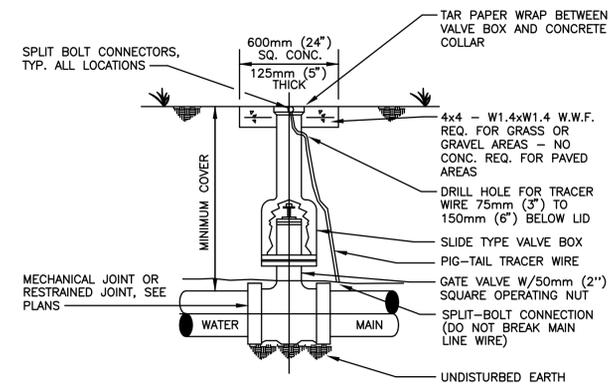
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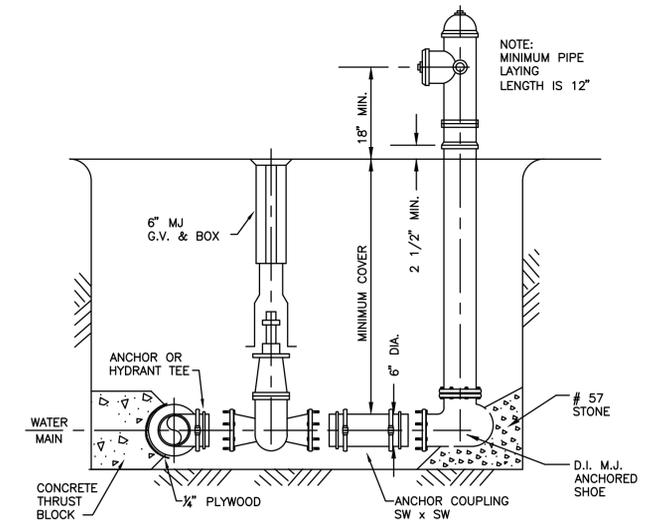
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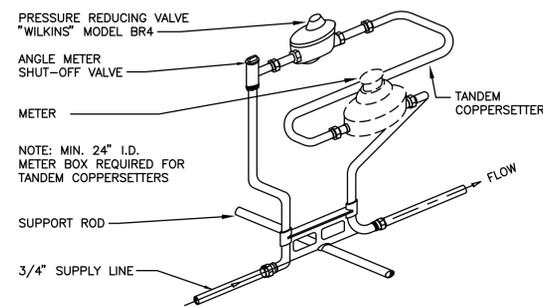
**GATE VALVE INSTALLATION**

NOT TO SCALE



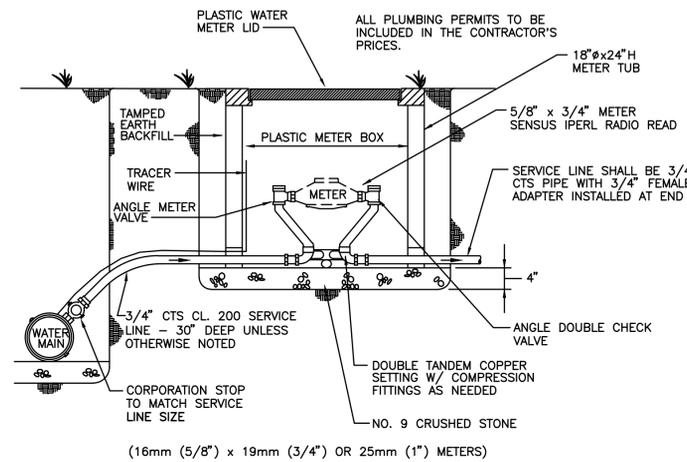
**FLUSHING HYDRANT ASSEMBLY**

NOT TO SCALE



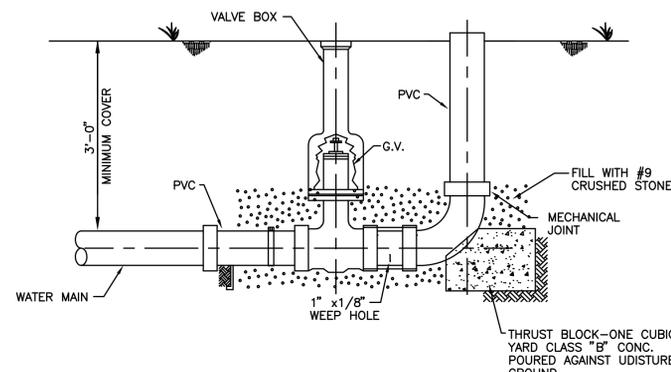
**TYPICAL PRESSURE REDUCING VALVE and CUSTOMER METER SERVICE**

NOT TO SCALE



**TYPICAL SERVICE CONNECTION**

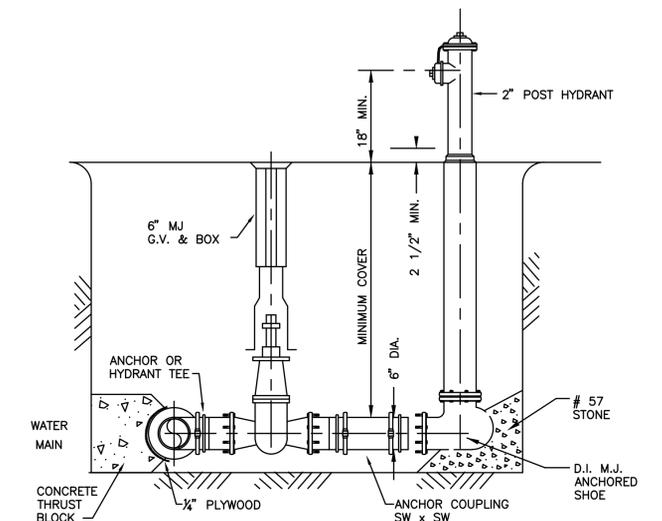
NOT TO SCALE



**BLOWOFF ASSEMBLY**

NOT TO SCALE

NOTE: ALL MECHANICAL JOINT CONNECTIONS SHALL HAVE GRIP RINGS.



**BLOWOFF HYDRANT ASSEMBLY**

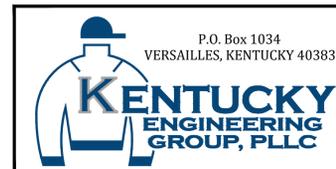
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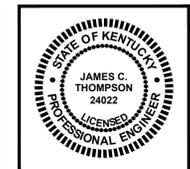


Contract No. 10

**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**

ELLIOTT COUNTY, KENTUCKY

**STANDARD DETAILS**



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Contract No. 10

# SANDY HOOK WATER DISTRICT WATER SYSTEM IMPROVEMENTS

FOR THE  
SANDY HOOK WATER DISTRICT  
ELLIOTT COUNTY, KENTUCKY

BOARD MEMBERS

BERNAL ATKINS - CHAIRMAN  
KIM CARROLL DALE HOWARD  
IRA VEST

GENERAL MANAGER

TRINA SARTAINE

JANUARY 2013

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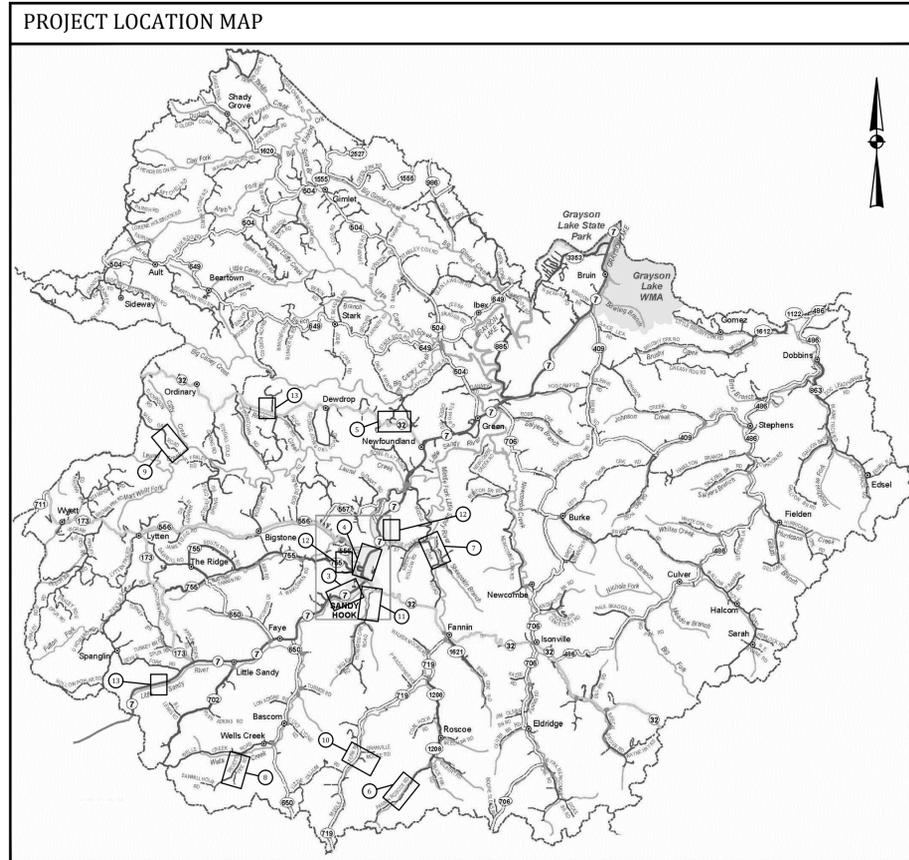
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**INDEX OF DRAWINGS**

SHT. NO.	DESCRIPTION:
--	COVER
1	LOCATION MAP, LEGEND, UTILITY OWNERS and INDEX OF DRAWINGS
2	GENERAL NOTES
3	AERIAL PLAN - MAIN STREET
4	AERIAL PLAN - CRESTVIEW STREET
5	AERIAL PLAN - SIMMONS ROAD LOOP
6	AERIAL PLAN - MIDDLE FORK
7	AERIAL PLAN - FLAT ROCK ROAD
8	AERIAL PLAN - PRUETTS FORK
9	AERIAL PLAN - SAND GAP ROAD
10	AERIAL PLAN - E.J. ADKINS ROAD
11	AERIAL PLAN - HOWARDS CREEK
12	AERIAL PLAN - CEMETERY and TOWN TANKS
13	AERIAL PLAN - WRIGLEY and KY 32 TANKS
14	SANDY HOOK WATER PLANT and KY 7 PUMP STATION MODIFICATIONS
15	STANDARD DETAILS
16	STANDARD DETAILS
17	STANDARD DETAILS

**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
---	---	PVC POLYVINYL CHLORIDE
---	---	DIP DUCTILE IRON PIPE
---	---	WM WATER MAIN
⊕	⊕	HYDRANT ASSEMBLY
⊕	⊕	FLUSHING/BLOWOFF ASSEMBLY
△	△	AIR RELEASE VALVE (ARV)
⊗	⊗	GATE VALVE (GV)
⊗	⊗	RECONNECT EXISTING METER
---	---	WATER MAIN (WM)
---	---	SPECIAL CROSSING OR CASING PIPE
---	---	WATER MAIN TO BE ABANDONED
---	---	RIGHT-OF-WAY LINE
---	---	CENTERLINE
---	---	PROPERTY LINE
OWNER	OWNER	EASEMENT ACQUIRED

**UTILITIES**

**BUD - Before You Dig**  
**1-800-752-6007**  
**or DIAL 811**

**NOTE:**  
 IN ACCORDANCE WITH KENTUCKY STATE LAW, ANY ACTIVITY THAT RESULTS IN MOVEMENT, PLACEMENT, BORING, PROBING OR DIGGING IN OR ON THE GROUND SHALL CONTACT THE ONE CALL CENTER FOR UNDERGROUND UTILITY LOCATIONS.

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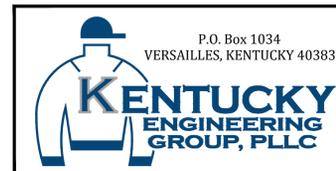
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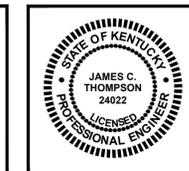
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Contract No. 10  
**SANDY HOOK WATER DISTRICT**  
**WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**PROJECT LOCATION MAP,**  
**UTILITIES, LEGEND and**  
**INDEX OF DRAWINGS**

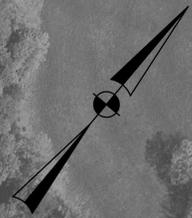


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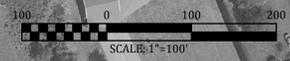


ALL LINE TO BE LAID WITHIN CITY R/W UNLESS OTHERWISE NOTED

CAUTION: EXISTING SANITARY SEWER AND BURIED ELECTRIC CABLE

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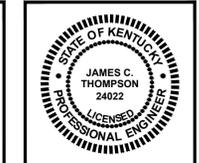
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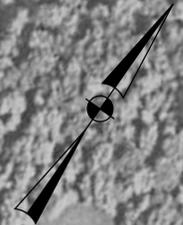
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**SANDY HOOK WATER DISTRICT**  
**WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN**  
**CRESTVIEW STREET**



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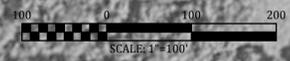


ALL LINE LAID WITHIN COUNTY  
RIGHT OF WAY THIS SHEET

ALL NEW METERS THIS SHEET  
SHALL INCLUDE IPRV

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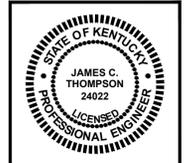
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**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**  
ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
SIMMONS ROAD LOOP**



PROJECT NO. <b>11001</b>
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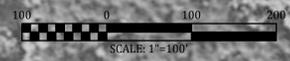
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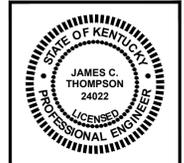
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**SANDY HOOK WATER DISTRICT**  
**WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN**  
**FLAT ROCK**



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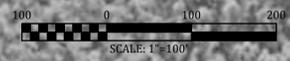
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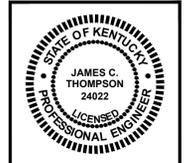


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WATER SYSTEM IMPROVEMENTS**

ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
PRUETTS FORK**



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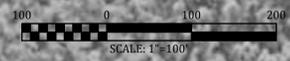
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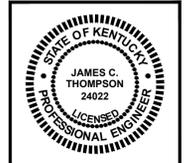
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	SEPT. 5, 2014	RECORD DRAWINGS	CDS

DATE:	JANUARY 2013
PROJECT MGR:	LRS
DRAWN BY:	CDS
CHECKED BY:	LRS
SCALE:	AS NOTED
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Contract No. 10  
**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**  
ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
PRUETTS FORK**



PROJECT NO. 11001
SHEET NO. 8 OF 17

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BY: KENTUCKY ENGINEERING GROUP, PLLC      DATE: 09/14



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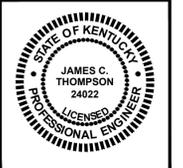
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	SEPT. 5, 2014	RECORD DRAWINGS	CDS

DATE:	JANUARY 2013
PROJECT MGR:	LRS
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Contract No. 10  
**SANDY HOOK WATER DISTRICT  
 WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
 SAND GAP ROAD**



PROJECT NO.  
11001

SHEET NO.  
9

OF 17

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**NOTES:**  
 1. INSTALL WATER MAIN ON COUNTY RIGHT-OF-WAY  
 2. DIRECTIONAL DRILL SHALL INCLUDE STATE HIGHWAY

STA. 10+00  
 CONNECT TO EX. 3" W.M.  
 1-2"x3"x3" TEE W/SLEEVE  
 1-2" G.V. & BOX

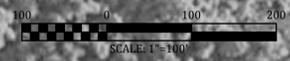
MAUDE ADKINS  
 160 L.F. DIRECTIONAL  
 DRILL CREEK CROSSING

STA. 24+00  
 END OF LINE  
 1-BLOWOFF ASSEMBLY

20 L.F. OF 2" PVC CASING  
 OVER EXIST. CULVERT  
 SERVICE LINE

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 BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14

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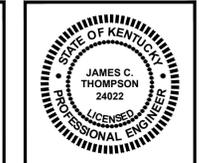
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PROJECT MGR:	LRS
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Contract No. 10  
**SANDY HOOK WATER DISTRICT  
 WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
 E.J. ADKINS ROAD**



PROJECT NO.	11001
SHEET NO.	10
OF 17	

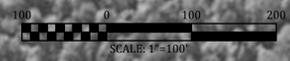
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**NOTE:**  
WATER MAIN MAY ONLY BE INSTALLED AFTER PROPOSED WELL IS OPERABLE OR AT A TIME DIRECTED BY ENGINEER.

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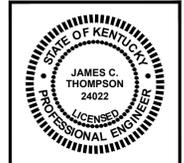
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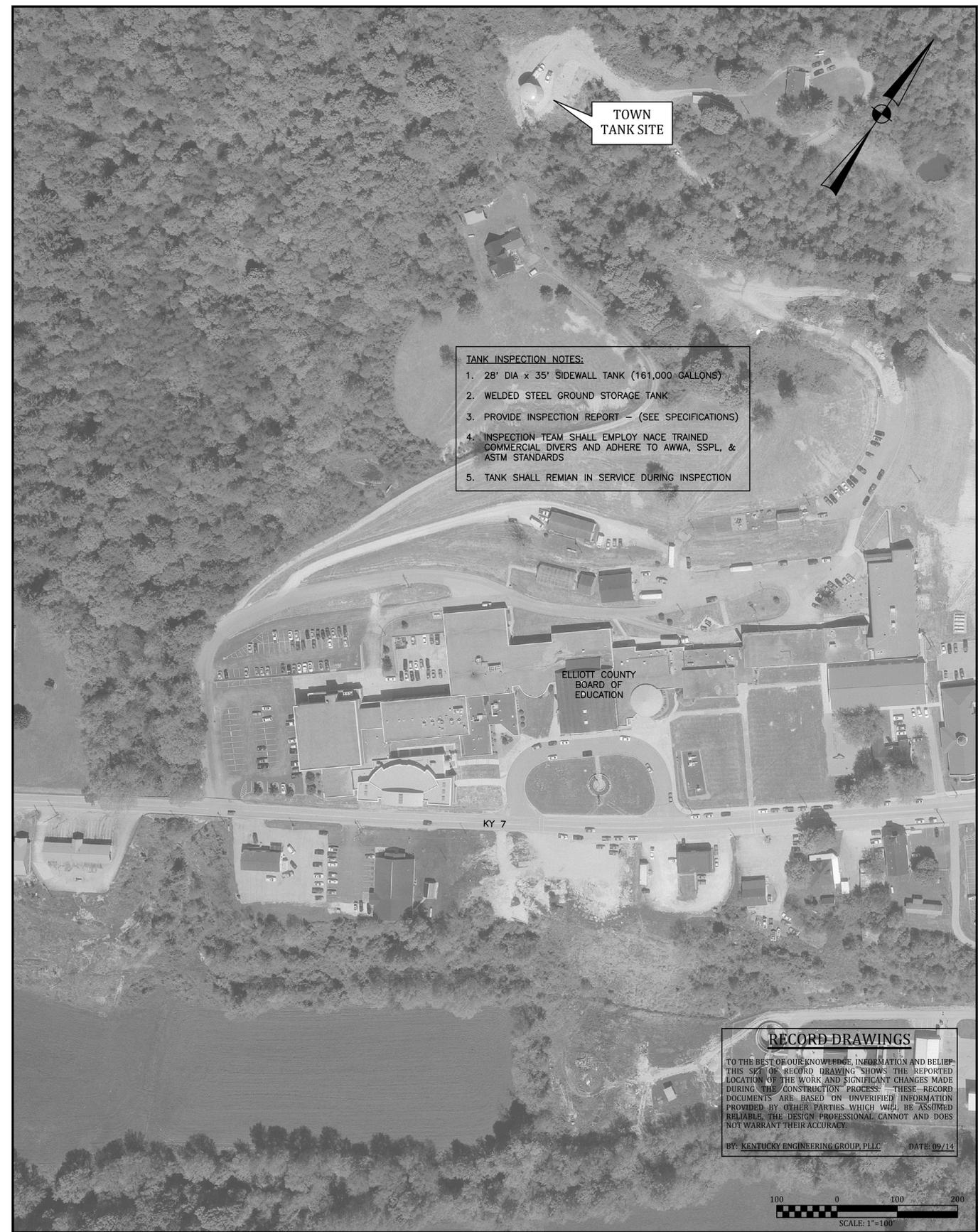
Contract No. 10  
**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**  
ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
HOWARDS CREEK ROAD**



PROJECT NO.	11001
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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14

SCALE: 1"=100'

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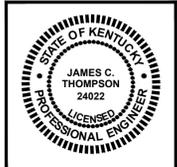
NO.	DATE	REVISIONS	BY
	SEPT. 5, 2014	RECORD DRAWINGS	CDS

DATE:	JANUARY 2013
PROJECT MGR:	LRS
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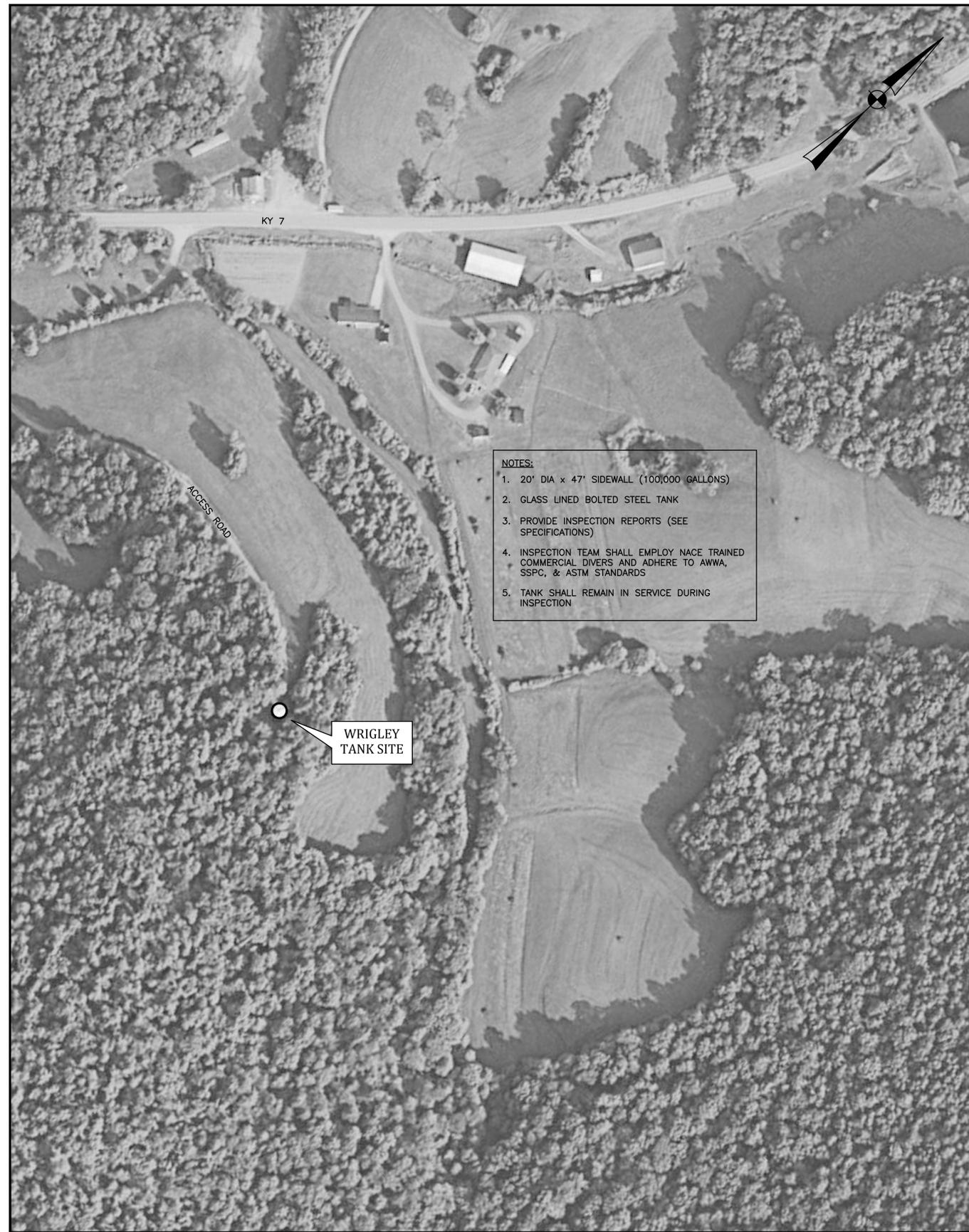
Contract No. 10  
SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS  
ELLIOTT COUNTY, KENTUCKY

AERIAL PLAN  
CEMETERY and TOWN  
TANK SITES

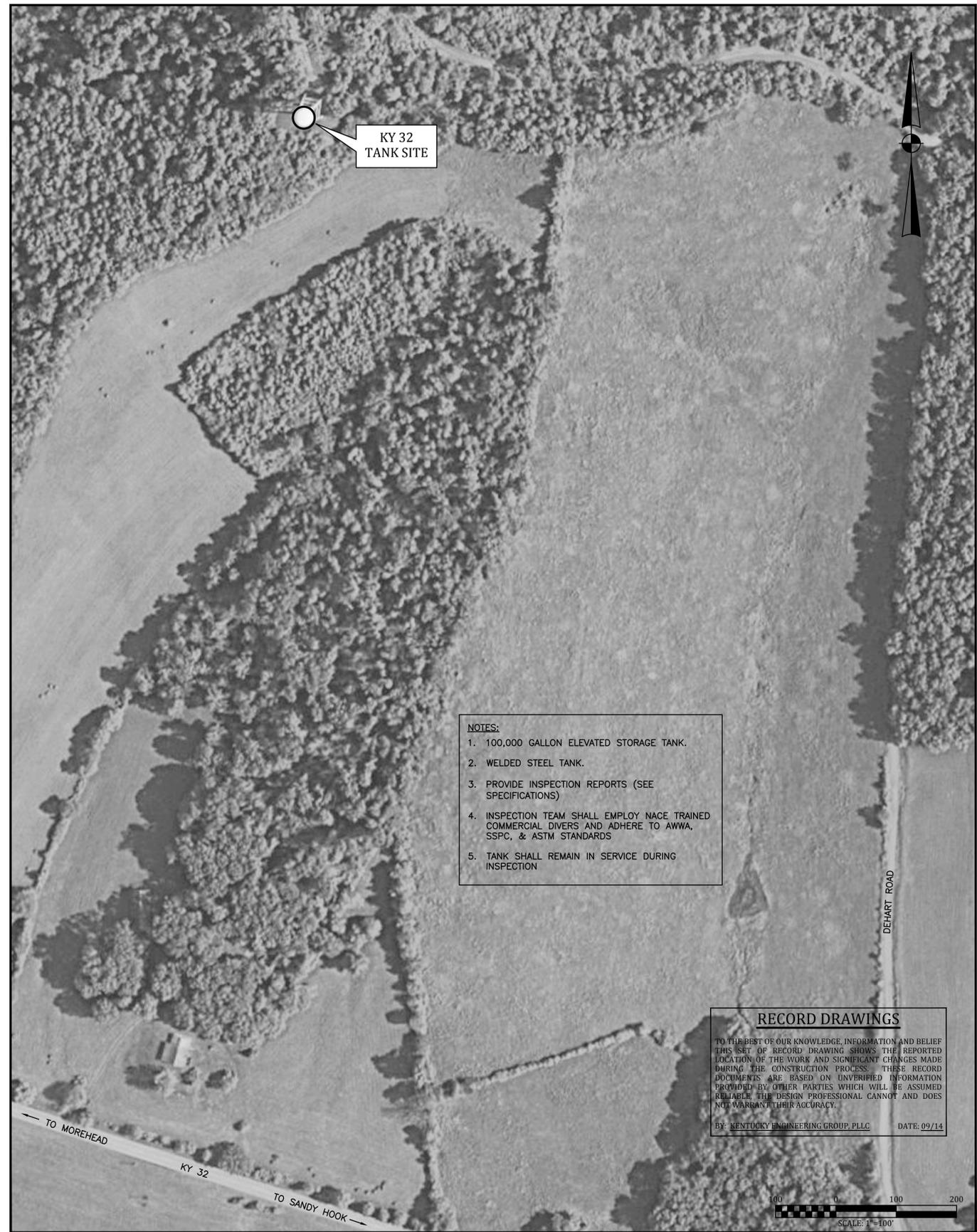


PROJECT NO.	11001
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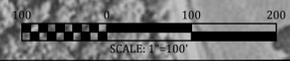


- NOTES:**
1. 20' DIA x 47' SIDEWALL (100,000 GALLONS)
  2. GLASS LINED BOLTED STEEL TANK
  3. PROVIDE INSPECTION REPORTS (SEE SPECIFICATIONS)
  4. INSPECTION TEAM SHALL EMPLOY NACE TRAINED COMMERCIAL DIVERS AND ADHERE TO AWWA, SSPC, & ASTM STANDARDS
  5. TANK SHALL REMAIN IN SERVICE DURING INSPECTION



- NOTES:**
1. 100,000 GALLON ELEVATED STORAGE TANK.
  2. WELDED STEEL TANK.
  3. PROVIDE INSPECTION REPORTS (SEE SPECIFICATIONS)
  4. INSPECTION TEAM SHALL EMPLOY NACE TRAINED COMMERCIAL DIVERS AND ADHERE TO AWWA, SSPC, & ASTM STANDARDS
  5. TANK SHALL REMAIN IN SERVICE DURING INSPECTION

**RECORD DRAWINGS**  
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Contract No. 10  
**SANDY HOOK WATER DISTRICT  
 WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**AERIAL PLAN  
 WRIGLEY TANK SITE**



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**SANDY HOOK WATER PLANT**

**NOTE 1:**

- a. INSTALL (1) 2" RELIEF VALVE W/6"x2" SADDLE & BALL VALVE.
- b. INSTALL 2" PVC, CLASS 200 PIPE FROM VALVE THRU WALL W/TIDFLEX RED VALVE.
- c. INSTALL FOAM INSULATION BETWEEN WALL & PIPE.



**KY 7 PUMP STATION**

**NOTES:**

- 1. PROVIDE AND INSTALL A QUICK CONNECT PROVISION FOR A PORTABLE GENERATOR.
- 2. HOOK-UP SHALL CONSIST OF A MANUAL OR AUTOMATED SWITCH.
- 3. EXISTING PUMP STATION:  
3 PHASE, 208-230/480 VOLTS, 10 hp, 3450 RPM, 27-25/12.5 AMPS
- 4. CONTRACTOR SHALL TEST NEW 35KW GENERATOR AFTER QUICK CONNECT HAS BEEN COMPLETED.

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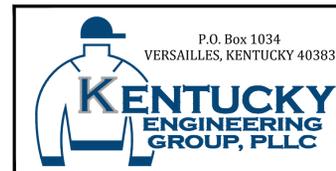
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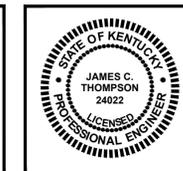
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Contract No. 10  
**SANDY HOOK WATER DISTRICT**  
**WATER SYSTEM IMPROVEMENTS**  
 ELLIOTT COUNTY, KENTUCKY

**SANDY HOOK WATER**  
**TREATMENT PLANT**  
 and KY 7 PUMP STATION  
**MODIFICATIONS**



PROJECT NO.	11001
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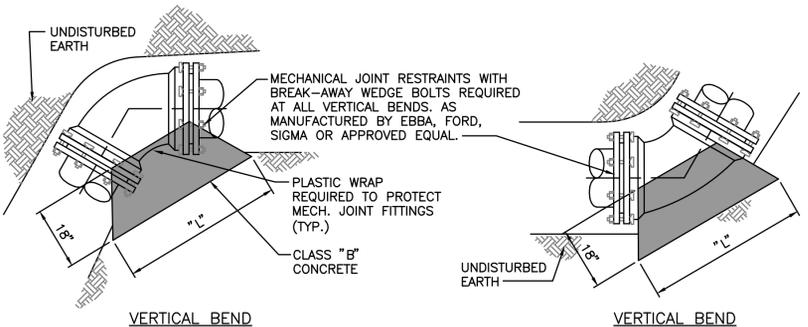
THRUST BLOCK SCHEDULE - CLASS 200 PVC														SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF													
PIPE SIZE	90° BEND				45° BEND				22 1/2° BEND				11 1/2° BEND				TEE & DEAD ENDS										
	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W			
4"	1.78	0.07	12"	16"	1.00	0.04	12"	12"	0.50	0.02	12"	6"	0.25	0.01	6"	6"	1.50	0.06	12"	18"	1.50	0.06	12"	18"			
6"	4.00	0.15	12"	24"	2.25	0.08	12"	18"	1.33	0.05	12"	12"	0.56	0.01	6"	6"	3.00	0.11	12"	24"	3.00	0.11	12"	24"			
8"	7.50	0.42	18"	36"	4.00	0.22	18"	24"	2.00	0.11	18"	18"	1.00	0.04	12"	12"	5.00	0.28	18"	30"	5.00	0.28	18"	30"			
10"	11.67	0.65	18"	42"	6.25	0.35	18"	30"	3.33	0.19	18"	24"	2.00	0.07	12"	18"	8.75	0.49	18"	42"	8.75	0.49	18"	42"			
12"	16.00	0.89	18"	48"	9.00	0.50	18"	36"	5.00	0.28	18"	30"	2.22	0.08	12"	20"	14.00	0.78	18"	48"	14.00	0.78	18"	48"			
14"	22.50	1.67	24"	60"	12.25	0.91	24"	42"	6.25	0.46	24"	30"	3.33	0.19	18"	24"	17.50	1.30	24"	60"	17.50	1.30	24"	60"			
16"	30.00	2.22	24"	72"	16.00	1.19	24"	48"	9.00	0.67	24"	36"	4.00	0.22	18"	24"	20.00	1.48	24"	60"	20.00	1.48	24"	60"			

THRUST BLOCK SCHEDULE - CLASS 250 PVC														SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF													
PIPE SIZE	90° BEND				45° BEND				22 1/2° BEND				11 1/2° BEND				TEE & DEAD ENDS										
	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W			
4"	2.667	.10	12	24	1.500	.06	12	18	1.250	.03	12	12	0.500	.01	6	12	6	1.667	.06	12	24	1.500	.06	12	24		
6"	5.000	.19	12	36	2.000	.11	12	24	1.500	.06	12	18	0.750	.01	6	12	9	4.000	.15	12	24	4.000	.15	12	24		
8"	9.000	.50	18	36	3.000	.28	18	36	2.000	.17	18	24	1.500	.06	12	18	12	7.000	.39	18	42	7.000	.39	18	42		
10"	9.255	.78	18	48	4.250	.42	18	36	3.000	.23	18	30	2.250	.08	12	18	18	10.500	.58	18	42	10.500	.58	18	42		
12"	13.327	1.11	18	60	6.000	.67	18	48	4.000	.33	18	36	3.000	.11	12	24	14.000	.78	18	48	14.000	.78	18	48			
14"	18.139	2.00	24	72	8.500	1.17	24	54	6.000	.56	24	36	4.000	.22	18	24	20.000	1.48	24	60	20.000	1.48	24	60			
16"	23.692	2.65	24	78	11.000	1.48	24	60	8.000	.78	24	42	5.000	.28	18	30	27.000	2.00	24	72	27.000	2.00	24	72			

THRUST BLOCK SCHEDULE - CLASS 350 D.I.P.														SOIL TYPE - SAND & GRAVEL BEARING STRENGTH = 3000 PSF													
PIPE SIZE	90° BEND				45° BEND				22 1/2° BEND				11 1/2° BEND				TEE & DEAD ENDS										
	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W	BEARING AREA	YDS OF CONCRETE	D	W			
4"	3.750	.21	18	30	1.875	.10	18	18	1.000	.06	18	12	0.500	.02	12	12	6	2.250	.13	18	18	2.250	.13	18	18		
6"	7.000	.39	18	42	3.750	.21	18	30	2.000	.11	18	24	1.000	.04	12	12	12	5.000	.28	18	30	5.000	.28	18	30		
8"	12.250	.91	24	42	6.250	.56	24	36	4.000	.30	24	24	2.000	.11	18	24	12	9.000	.67	24	36	9.000	.67	24	36		
10"	20.000	1.48	24	60	10.500	.78	24	42	6.000	.44	24	36	3.000	.17	18	24	18	14.000	1.04	24	48	14.000	1.04	24	48		
12"	30.000	2.78	30	72	15.750	1.46	30	54	9.000	.69	30	36	4.000	.30	24	24	24	20.000	1.85	30	60	20.000	1.85	30	60		
14"	39.000	4.33	36	78	20.000	2.22	36	60	12.000	1.17	36	42	6.000	.56	30	36	24	27.500	3.06	36	66	27.500	3.06	36	66		
16"	49.000	6.35	42	84	27.500	3.56	42	66	14.000	1.81	42	48	7.500	.83	36	36	30	37.500	4.63	42	78	37.500	4.63	42	78		

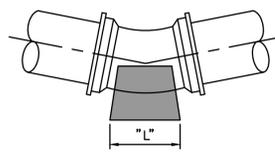
### THRUST-BLOCKING SCHEDULE

NOT TO SCALE

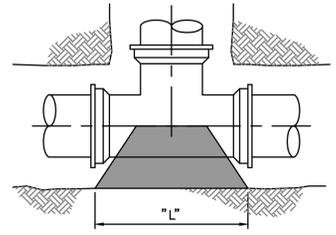


VERTICAL BEND

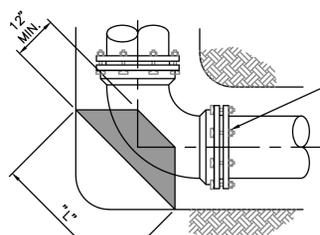
VERTICAL BEND



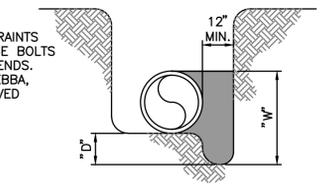
11 1/2, 22 1/2 AND 45° BEND THRUST BLOCKS



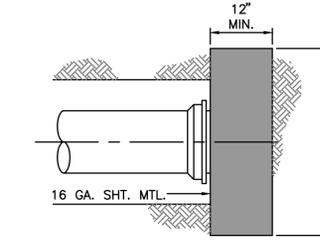
TEE THRUST BLOCKS



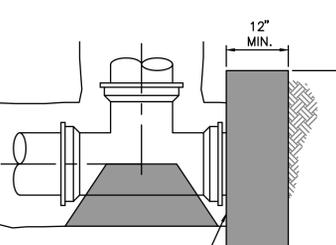
90° BEND THRUST BLOCKS



SECTION-TYP. THRUST BLOCK



END OF MAIN THRUST BLOCKS

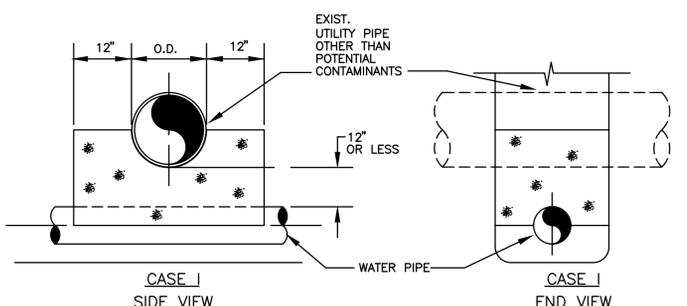


PLUGGED TEE THRUST BLOCKS

(SEE THRUST BLOCK SCHEDULE FOR DIMENSIONS OF BLOCKING)

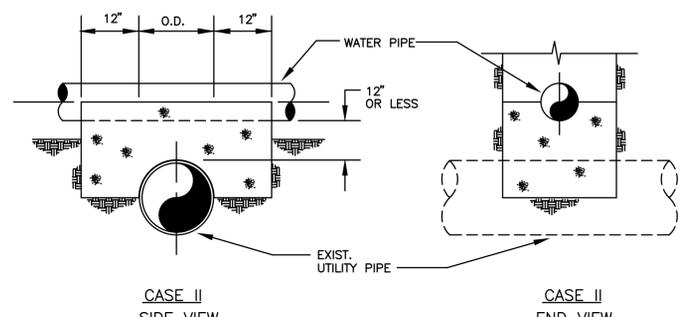
### THRUST-BLOCKING DETAIL

NOT TO SCALE



CASE I SIDE VIEW

CASE I END VIEW



CASE II SIDE VIEW

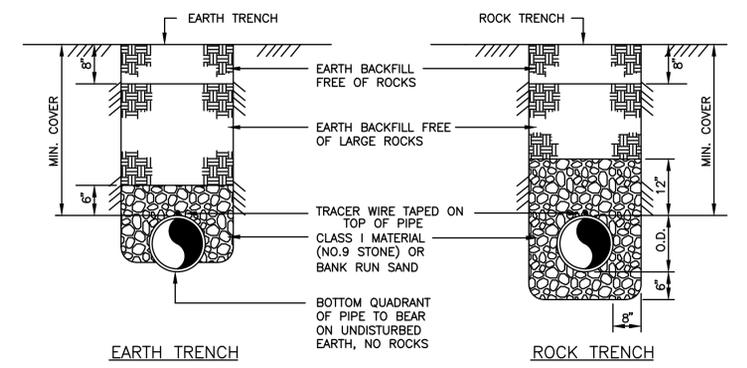
CASE II END VIEW

NOTES:

- CONCRETE SEPARATOR SHALL BE USED WHEN CLEARANCE BETWEEN WATER LINE AND UTILITY PIPE IS 12" OR LESS.
- "UTILITY PIPE" INCLUDES UNDERGROUND WATER, NATURAL GAS, TELEPHONE, ELECTRICAL CONDUITS, STORM SEWER OR TYPICALLY NON-CONTAMINATING FACILITIES, WHEN CROSSING SANITARY SEWER OR POTENTIAL CONTAMINANTS SEE DETAIL "WATER/SANITARY SEWER CROSSING".

### UTILITY CROSSING CONCRETE SEPERATOR

NOT TO SCALE

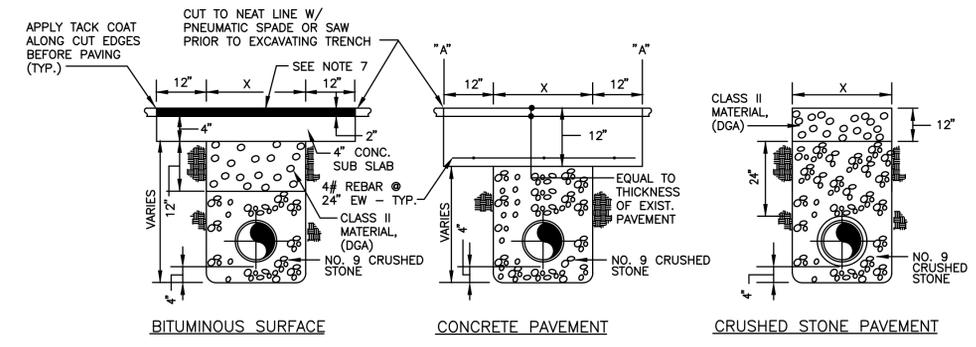


### TYPICAL BEDDING and BACKFILL

NOT TO SCALE

NOTES:

- REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND THICKNESS (2" MIN.) AS EXISTING PAVEMENT.
- IF ROCK IS ENCOUNTERED, A MINIMUM OF 6" NO. 9 CRUSHED STONE MUST BE PLACED UNDER THE ENCASEMENT PIPE.
- X = MAX. WIDTH OF TRENCH AT SURFACE UNDER NORMAL CONDITIONS (36" + PIPE O.D.)
- FROM POINTS "A" TO NEAREST JOINT OR BREAK IN PAVEMENT MUST BE AT LEAST 6' OR MORE. IF LESS THAN 6' REMOVE PAVEMENT TO JOINT OR BREAK AND REPLACE ENTIRE SLAB.
- NO. 610 CRUSHED STONE MAY BE SUBSTITUTED FOR MECHANICALLY TAMPED EARTH BACKFILL WITH PRIOR APPROVAL OF THE ENGINEER.
- 1" SAW CUT OUTSIDE OF TRENCH LINES, BITUMINOUS PATCH PLACED IN 2" LIFTS WITH TACK COAT ON EACH SIDE, EACH LIFT COMPACTED WITH SMALL ROLLER.

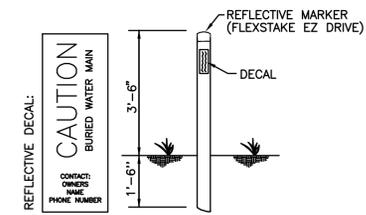


### PAVEMENT REPLACEMENT

NOT TO SCALE

NOTE:

WATER MARKERS SHALL BE PLACED WHENEVER A ROAD CROSSING IS MADE AT EACH SIDE OF THE ROAD AND AT EACH VALVE OR SET OF VALVES.



### WATER MARKER DETAIL

NOT TO SCALE

**RECORD DRAWINGS**

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THIS SET OF RECORD DRAWING SHOWS THE REPORTED LOCATION OF THE WORK AND SIGNIFICANT CHANGES MADE DURING THE CONSTRUCTION PROCESS. THESE RECORD DOCUMENTS ARE BASED ON UNVERIFIED INFORMATION PROVIDED BY OTHER PARTIES WHICH WILL BE ASSUMED RELIABLE. THE DESIGN PROFESSIONAL CANNOT AND DOES NOT WARRANT THEIR ACCURACY.

BY: **KENTUCKY ENGINEERING GROUP, PLLC** DATE: 09/14

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	SEPT. 5, 2014	RECORD DRAWINGS	CDS

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DRAWN BY:	CDS
CHECKED BY:	LRS
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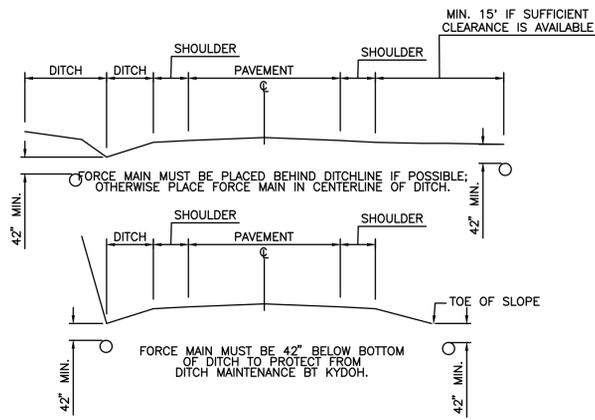
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**SANDY HOOK WATER DISTRICT**  
WATER SYSTEM IMPROVEMENTS  
ELLIOTT COUNTY, KENTUCKY

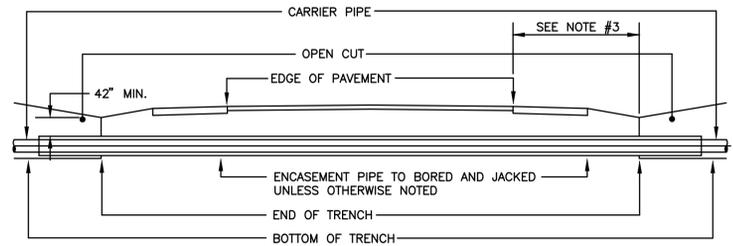
**STANDARD DETAILS**

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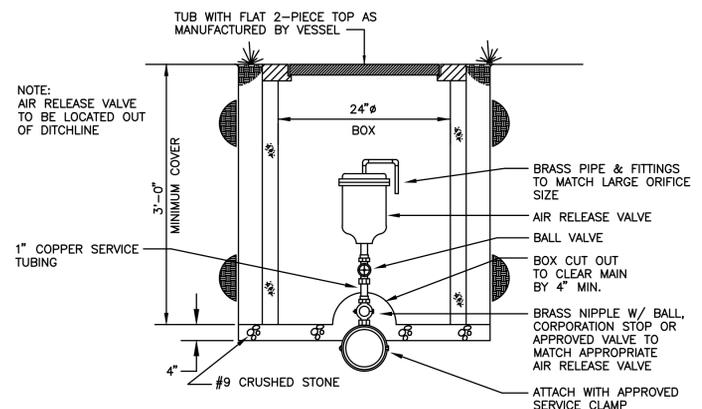


**TYPICAL CONSTRUCTION ON KYDOH RIGHT-OF-WAY**  
NOT TO SCALE

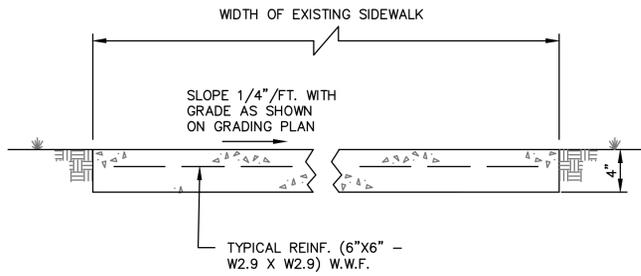


- NOTE: SEE DETAIL A FOR PLACEMENT OF CARRIER PIPE IN CASING PIPE.
- NOTES:
1. ALL JOINTS SHALL BE SOLIDLY WELDED. END OF CASING SHALL BE SEALED AFTER LINE HAS BEEN INSTALLED AND TESTED.
  2. MINIMUM DEPTHS MAY INCREASE IN AREAS WHICH REQUIRE MINIMUM SEPARATION WITH OTHER FACILITIES.
  3. OPEN TRENCH NO CLOSER THAN THE DITCHLINE OR TOE OF FILL FROM THE EDGE OF THE PAVEMENT OR AS DIRECTED BY THE SPECIFICATIONS.
  4. HIGHWAY CROSSINGS SHALL UTILIZE STEEL CASING PIPE. STEEL CASING PIPES 4" AND LESS SHALL BE NEW SCHEDULE 40. STEEL CASING PIPES LARGER THAN 4" SHALL HAVE MINIMUM WALL THICKNESS OF 0.25". ALL BORED AND JACKED ENCASEMENT PIPE SHALL BE INSTALLED IN BORE HOLES NO LARGER THEN THE OUTSIDE DIAMETER OF THE ENCASEMENT PIPE.

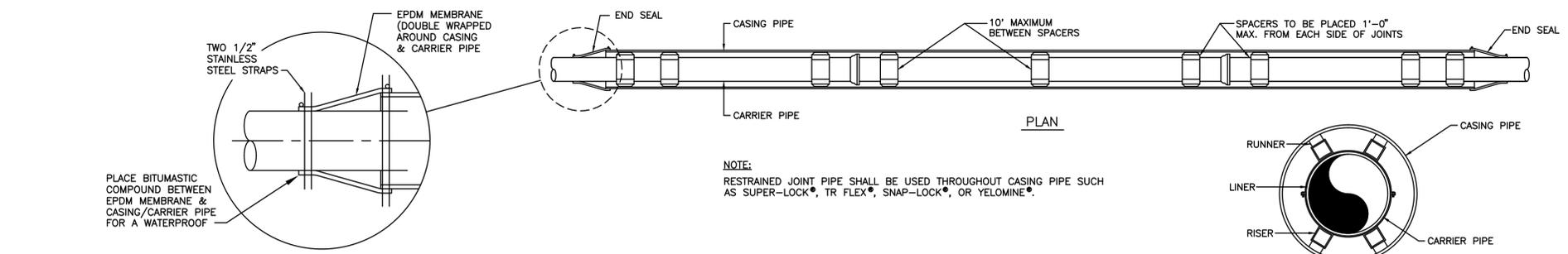
**CROSS SECTION OF ENCASED ROAD CROSSING - TYPICAL**  
NOT TO SCALE



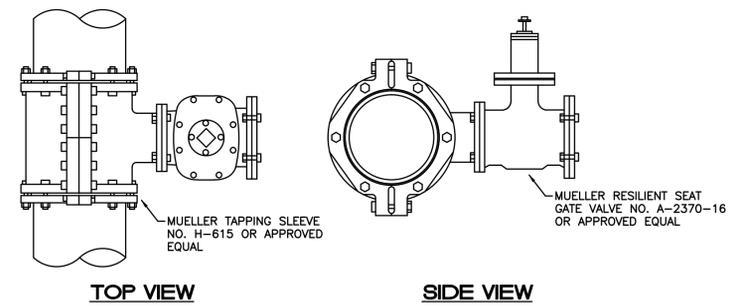
**AIR RELEASE VALVE**  
NOT TO SCALE



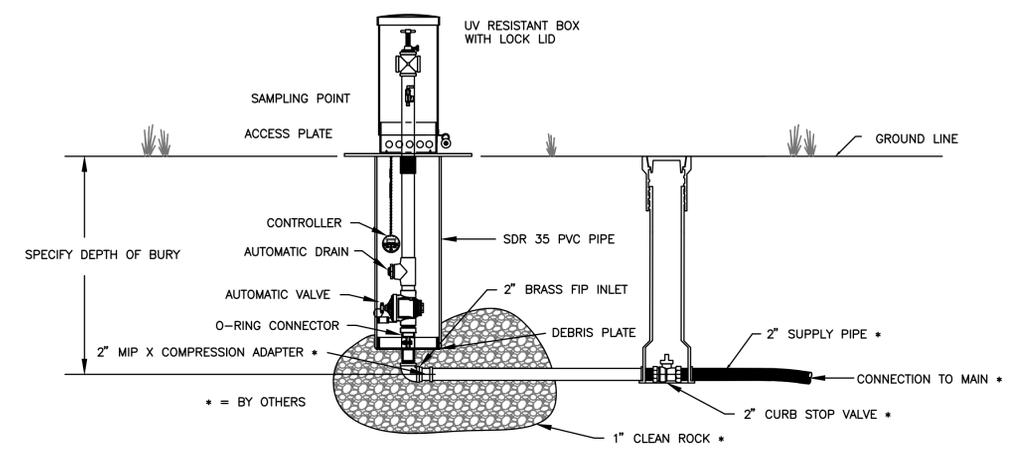
**CONCRETE SIDEWALK**  
NOT TO SCALE



**DETAIL "A" - ENCASEMENT PIPE SPACER**  
NOT TO SCALE



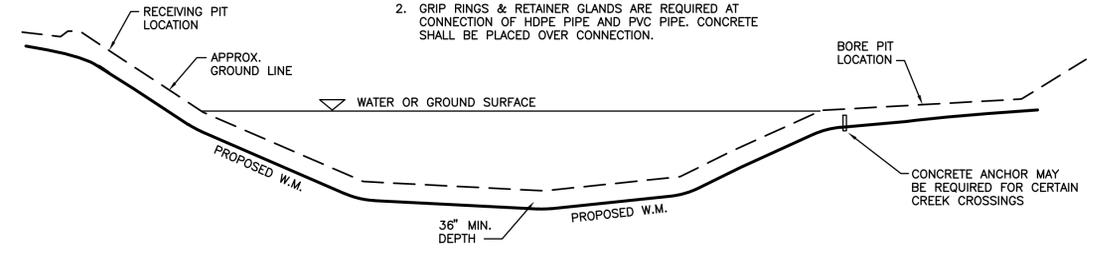
**TYPICAL - WET TAP**  
NOT TO SCALE



NOTE: FLUSH WATERLINES FREE OF DEBRIS BEFORE INSTALLATION

**AUTOMATIC FLUSHING DEVICE**  
NOT TO SCALE

- NOTES:
1. ACTUAL GROUND PROFILE SHALL BE DETERMINED BY CONTRACTOR PRIOR TO PERFORMING DIRECTIONAL BORE TO INSURE PROPER DEPTH.
  2. GRIP RINGS & RETAINER GLANDS ARE REQUIRED AT CONNECTION OF HDPE PIPE AND PVC PIPE. CONCRETE SHALL BE PLACED OVER CONNECTION.



**TYPICAL CREEK/SURFACE DIRECTIONAL BORE DETAIL**  
NOT TO SCALE

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BY: KENTUCKY ENGINEERING GROUP, PLLC DATE: 09/14

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**SANDY HOOK WATER DISTRICT  
WATER SYSTEM IMPROVEMENTS**

ELLIOTT COUNTY, KENTUCKY

**STANDARD DETAILS**



PROJECT NO.  
11001

SHEET NO.  
16

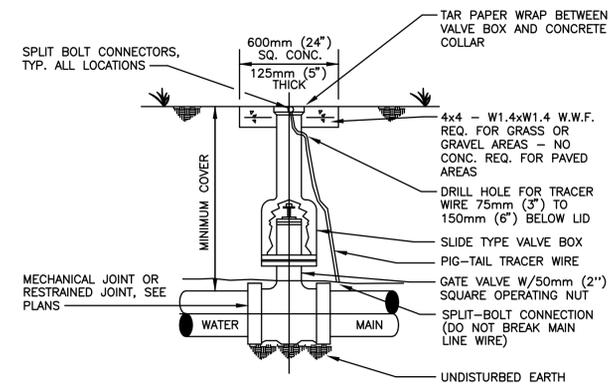
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**RECORD DRAWINGS**

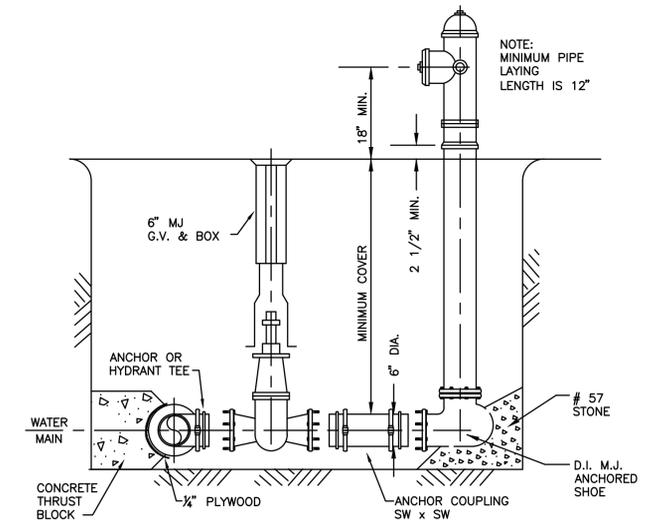
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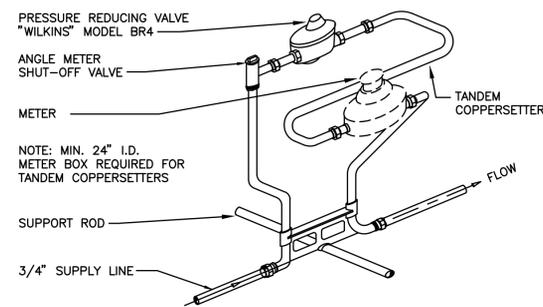
**GATE VALVE INSTALLATION**

NOT TO SCALE



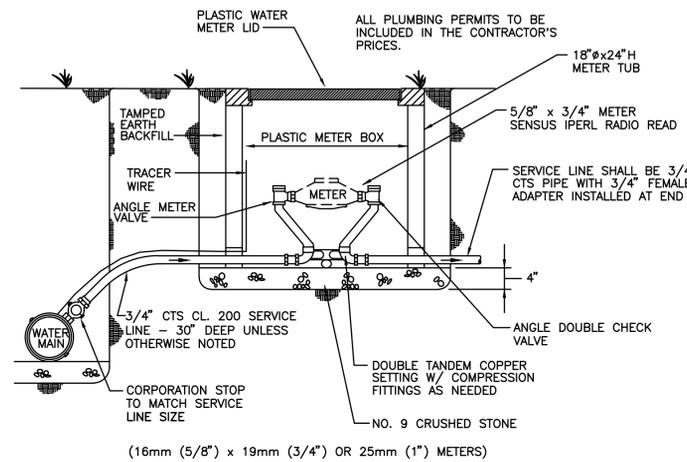
**FLUSHING HYDRANT ASSEMBLY**

NOT TO SCALE



**TYPICAL PRESSURE REDUCING VALVE and CUSTOMER METER SERVICE**

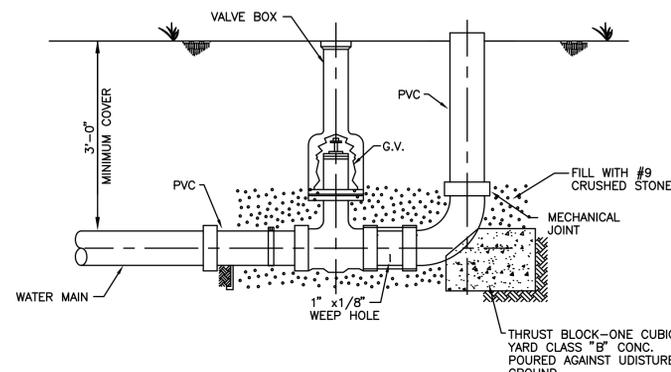
NOT TO SCALE



**TYPICAL SERVICE CONNECTION**

NOT TO SCALE

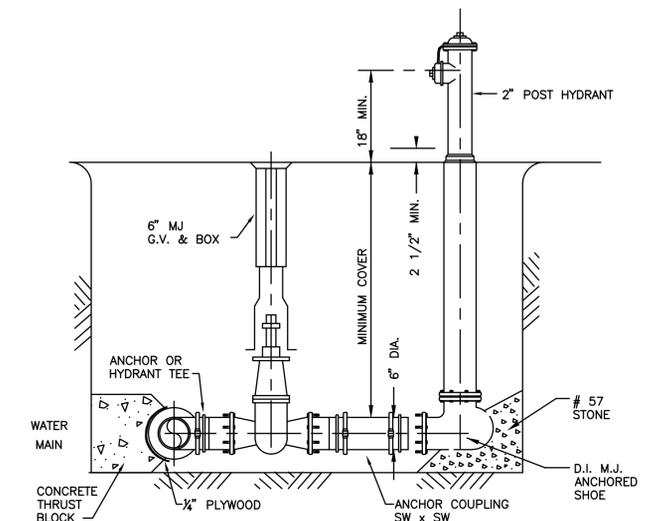
(16mm (5/8") x 19mm (3/4") OR 25mm (1") METERS)



**BLOWOFF ASSEMBLY**

NOT TO SCALE

NOTE: ALL MECHANICAL JOINT CONNECTIONS SHALL HAVE GRIP RINGS.



**BLOWOFF HYDRANT ASSEMBLY**

NOT TO SCALE

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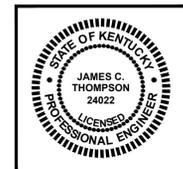
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